Table 2.2-10
RAO 7 PRG Derivation
Portland Harbor Superfund Site
Portland, Oregon

COCs	Units	TRV from BERA	ARAR	PRG
	RAO 7 **Reduce risks to ecological receptors from ingestion of and direct contact with contaminants in surface water by reducing the concentrations of COCs in surface water at the site to the proposed remediation goals.**			
	Surface Water			
Arsenic	µg/L	NA	190	190[2,3]
Cadmium	µg/L	0.09	0.09	0.09[3,4,5]
Chromium	µg/L	NA	11	11[3,6]
Copper	µg/L	2.74	3.6	2.74
Lead	µg/L	0.54	0.54	0.54[3,4,7]
Mercury	µg/L	NA	0.012	0.012
Zinc	µg/L	36.5	36.5	36.5[3,4,8]
Cyanide	µg/L	5.2	5.2	5.2[10]
Aldrin	µg/L	3	3	3
Chlordanes	µg/L	0.0043	0.0043	0.0043
1,2-Dichlorobenzene	µg/L	14	NA	14
DDE	µg/L	NA	NA	NA
DDx	µg/L	0.011	0.001	0.011[1]
2,4-D	µg/L	NA	NA	NA
Dieldrin	µg/L	0.056	0.056	0.056
Ethylbenzene	µg/L	7.3	NA	7.3
Bis-2-Ethylhexpyphthalate	µg/L	3	NA	3
Dioxins/Furans (2,3,7,8-TCDD Eq)	µg/L	0.001	0.000038	0.000038
Hexachlorobenzene	µg/L	NA	NA	NA
gamma-Hexachlorocyclohexane	µg/L	0.08	0.08	0.08
Pentachlorophenol	µg/L	NA	13	13[9]
Total PCBs	µg/L	0.19	0.014	0.19[1]
Total PAHs	µg/L	NA	NA	NA
Total LPAHs	µg/L	12	NA	12
Total HPAHs	µg/L	0.014	NA	0.014
Tributyltin	µg/L	NA	0.063	0.063
2,4,5-TP	µg/L	NA	NA	NA

Notes:

NA - Not available

1 - ARAR is more conservative but TRV was selected because of the receptor assumptions in the value.

2 - This value is for total Arsenic (Arsenic III + Arsenic V).

3 - This value is for the dissolved fraction.

4 - This is a hardness dependent metal. All values were calculated based on 25 mg/l of CaCO3

5 - The value for cadmium is calculated as follows: CCC=(exp(0.7409*ln(hardness)-4.719))*(1.101672-(ln(hardness)*0.041838))

6 - This value is for Chromium VI.

7 - The value for lead is calculated as follows: CCC=(exp(1.273*ln(hardness)-4.705))*(1.46203-(ln(hardness)*0.145712))

8 - The value for zinc is calculated as follows: CCC=(exp(0.8473*ln(hardness)+0.884))*0.986

9 - The value for pentachlorophenol is expressed as a function of pH, and is calculated as follows: CCC=exp(1.005(pH)-5.134). Value based on pH=7.8.

10 - This value is expressed as free cyanide (CN)/L.